

Circular Queue

Algorithm -

1. Initialize the queue, with size of the queue defined (maxSize), and head and tail pointers.
2. enqueue: Check if the number of elements is equal to $\text{maxSize} - 1$.
 - ..> If Yes, then return Queue is full
 - ..> If NO, then add the new data element to the location of Tail pointer and increment the tail pointer.
3. dequeue: Check if the number of elements in the queue is zero
 - ..> If Yes, then return Queue is empty
 - ..> If No, then increment the head pointer
4. Finding the size:
 - ..> If $\text{tail} \geq \text{head}$, $\text{size} = (\text{tail} - \text{head}) + 1$
 - ..> But if, $\text{head} > \text{tail}$, then $\text{size} = \text{maxSize} - (\text{head} - \text{tail}) + 1$